



Description

Shower arrangement

The invention is based on a shower arrangement with a wall bar and a shower mounted to the wall bar.

The use of wall bars is known, for example, to fix hand showers with sliding holders, which can then be adjusted to the height of the user. These wall bars are screwed, for example, at their top and bottom ends to a bracket on a wall. They may also be used as supports.

A shower device is already known (DE 196 49 004), wherein attached to a mixer tap is a hollow bar, to which a head shower is attached at its top end that is fixed to the wall.

Also known is a shower bar for a sanitary shower unit with a vertical wall bar arranged away from a side wall, which is designed to support at least one bracket for a hand shower. A head shower can be arranged at the top end of the wall bar. Attachable to the bottom end of the wall bar with the aid of a quick-release coupling is a shower hose, which then routes the water through the hollow wall bar to the head shower (DE 196 49 005). As the head shower operates, the hose, also usable as a hand shower, hangs down and is therefore a potential hazard.

The purpose of the invention is to create a shower arrangement that can be attached, even retrospectively, to a point not designed for a shower installation and that offers a user improved showering facilities.

The invention proposes a shower arrangement with the characteristics indicated in Claim 1. Further developments of the invention are the object of the sub-claims.

Water-carrying wall connections are designed, for example, for permanently installed head showers. Such connections frequently exist in simply equipped bathrooms. According to the invention, a wall bar can now be attached to this wall connection in place of the head shower, wherein this attachment supplies the wall bar with water. The wall bar therefore forms part of the water supply or is the water supply itself. At the same time, the fixing of the wall bar to the wall connection can create the entire mechanical connection. The wall bar can therefore, for example, be fitted only on one side, wherein the wall bar can be directed downwards from the head shower connection arranged at its top. The wall bar can run either vertically or diagonally. If a wall bar has a longer length, it is of course also possible to create a further fixing on the wall at its lower end using a support. The basic concept, however, is that the wall bar has a mechanical, water-carrying fastening to the wall connection.

The at least one shower included in the shower arrangement can be attached to the wall bar by a variety of methods.

As the shower arrangement proposes to fix the wall bar to a water-carrying wall connection, a shut-off valve closing off this wall connection can also be used in the shower arrangement. It is, however, possible and within the scope of the invention, for at least one shower of the shower arrangement to exhibit its own valve device for shut-off.

In accordance with the invention, a further development proposes at least one shower of the shower arrangement to be designed as a side shower.

In yet another development of the invention, at least one shower is fixed to the wall bar and supplied with water through a radial opening in the wall bar.

An alternative way of assigning a shower to the shower arrangement consists in that at least one shower is a hand shower connected via a shower hose. The shower hose can be connected at any point on the wall bar, preferably at its bottom. A branch connection for the shower hose in the top area of the wall bar would also be feasible.

A further development of the invention proposes that at least one shower is adjustable, wherein the variable to be adjusted includes the location of the shower, the type of emitting shower jet and the direction in which the shower jet is to be emitted.

For example, a shower formed as a side shower can be bolted directly into a radial opening in the wall bar.

It is, however, also possible and within the scope of the invention, for at least one shower to be arranged in a housing held on the wall bar. The housing can be a relatively small housing formed as a block. Its sole function is to hold the shower onto the wall bar.

The housing onto or into which the at least one shower is attached can be a development of the invention in that it is movable in relation to the wall bar, for example can be rotated and/or slid in an axial direction. In accordance with the invention, a stop can also be provided, although this is not necessary if the housing is rotating. In this case, a complete rotation of 360 degrees can be achieved.

In a further development of the invention, the movement of the housing in relation to the wall bar can effect a change in the shower characteristic. For example, the movement of the housing changes the direction of the jet and/or the jet characteristic.

It is also possible and within the scope of the invention for the movement of the housing to effect and/or represent actuation of the valve device for the shower. For example, it is possible for a rotation of the housing from a zero position to initially change the jet direction of the shower, until a further rotation switches off the shower.

It is also possible for the movement of the housing in one direction to effect a change in the jet characteristics and for a different type of movement of the

housing to actuate the valve device. For example, an axial sliding movement of a housing could cause a change in the jet characteristic from a sharp, narrow jet to a wide, fanned jet, while a rotational movement around the axis of the wall bar switches off the shower.

The housing attached to the wall bar can, for example, exhibit only one shower. Several showers would necessitate several housings. However, it is also possible and within the scope of the invention for one housing to exhibit several showers. These showers can, depending on design, operate simultaneously. This would, for example, be the case if the housing exhibits two or several showers arranged on top of one another, which then, when directed forwards, emit water simultaneously. However, it is also possible in this case for the showers to operate alternately. Two showers arranged on top of one another could, for example, cause the housing to slide and switch on or switch off either shower.

In accordance with the invention, a development also permits the presence of several housings, each of which can exhibit either one single or several showers.

Several housings can change their position in relation to the wall bar either individually or together. A common position change of several separate housings can be achieved, for example, by these housings being connected together via a pipe surrounding the wall bar.

In a further extension of the invention, the shower arrangement can exhibit a switch, which toggles between a shower attached to the wall bar and the hand shower.

It has already been mentioned that one option of switching on and off the shower attached to the wall bar is to alter the position of a housing in relation to the wall bar. It is, however, also possible and within the scope of the invention, for a shower to be formed such that it can be switched on and off without the position of the housing being altered. For example, the shower can be a

side shower that switches off when pushed in and switches back on again when pulled out. Such a side shower can also be swivelled in its jet emission direction, without the housing having to be moved in relation to the wall bar.

Other characteristics, details and benefits of the invention are derived from the following description of a preferred embodiment of the invention, the patent claims and the summary, the wording of which has been made through reference to the content of the description and with the aid of the drawings. The following are shown:

Figure 1 in a general view, a wall bar in accordance with the invention with several showers;

Figure 2 on an enlarged scale, a section through the shower arrangement in Figure 1;

Figure 3 in a scale larger than Figure 1, an axial section through the bottom end of the arrangement in Figure 1;

Figure 4 a longitudinal section through a part of a shower arrangement with two side showers;

Figure 5 the arrangement of a wall bar on a wall equipped with a step;

Figure 6 a simplified design of a wall bar in accordance with the invention.

Figure 1 shows a wall bar 1, formed as a cylindrical, hollow pipe and in its top area, via an elbow 2, passing into a post 3 running vertical to the rest of the wall bar 1. Formed at the end of the post 3 is a screw neck 4, by which the wall bar can be bolted to an appropriate wall connection. The reverse design is also possible, wherein the wall bar can be bolted to a connector fitted with an external thread projecting from the wall. The join with the wall connection not shown can then be covered with a rosette 5.

Arranged on the part of the wall bar 1 running parallel to the wall surface are two housings 6, which are used for mounting the showers 7, 8 only shown in the schematic. The housing 10 arranged at the bottom end 9 of the wall bar 1 exhibits a further connection 11 for a shower hose 12, which leads to a hand shower.

Arranged on the top housing 6 shown in Figure 1 is a shower 7 with an outlet opening pointing towards the front side, while arranged on the opposite side in the shown position pointing towards the wall are two showers 8 arranged on top of each other with narrower outlet openings.

Details of the arrangement of housing 6 on wall bar 1 are described below.

Firstly Figure 2, which shows a section through the housing 10 in the area of the bottom end of wall bar 1. The housing 10 is fitted with a rear wall 13 encompassing the wall bar 1. The rear wall thus firmly clamps the housing onto wall bar 1. Wall bar 1 exhibits an opening 14 aligned radial towards the front side. Leading to the channel 15, the housing 10 exhibits an outlet opening 7, which contains an inserted sleeve 16. The sleeve consisting of elastomer material is located on the outside of the wall bar 1 at a certain tension, thereby creating a seal so that the water flowing from wall bar 1 through the opening 14 can only escape outwards through channel 15. In the position shown, therefore, the shower 7 on the front of the wall bar 1 is in operation.

On the bottom of the housing 10 is a connection 11, which exhibits an axial opening 17. This axial opening 17 is connected to a channel 18, which runs in a radial direction and is surrounded by a sleeve 19 similar to the one mentioned for channel 15. This sleeve 19 also lies flush to the outside of wall bar 1. If housing 10 in the position in Figure 2 is now rotated in a clockwise direction around the wall bar 1, the water flow to channel 15 is firstly closed. If the housing is rotated further, the water flow to channel 18 then opens as soon as the housing reaches the peripheral position of the radial opening 14. This in turn switches on the connection for the shower hose 12, so that a hand shower attached to the other end of the shower hose 12 is now put into op-

eration. This hand shower can be hung from a holder 20 arranged on the connection 11. This can be a standard cone holder. The wall bar can then therefore provide the function of a standard bracket for a hand shower.

Figure 3 shows an axial section through the bottom end of the wall bar 1 in Figure 1. Pushed into the bottom end of the wall bar 1 is a plug 21, which exhibits a transverse wall. Formed above the transverse wall is a channel 23, which creates a connection between the inside of the wall bar 1 above the transverse wall and the opening 14 in the wall of the wall bar 1. This channel 23 routes the water from the inside of the wall bar 1 to the opening 14 and from there either to channel 15 or channel 18. Under the transverse wall 22, the plug 21 contains a seal 24 that seals the inside of the wall bar 1 to below. Also arranged above the transverse wall near the top end of the plug 21 is an appropriate seal 25, which is retained in a circumferential groove, exactly as the bottom seal 24. The axial position of the plug 21 is defined by an outer flange 26 arranged at the bottom end of the wall bar 1. In this position, the plug 21 is secured by hooks 27, which snap into the opening in the wall bar 1. Defining an axial position for plug 21 ensures that the water reaches the correct place and the opening 14. Flange 26 also defines the axial position of the housing 10.

Arranged outside the plug 21 in the wall bar 1 is a distance sleeve 28, at the top end of which is an insert 29, see Figure 4. The insert 29 has an axial, continuous channel 30 with a branch connection 31, which leads to another opening 32 in the wall of the wall bar 1. Arranged at this point is the housing 6 of the shower 7. The seal is effected in the same way as with housing 10 with the aid of a sleeve. In turn, the insert 29 exhibits both above and below the branch 31 seals, which are retained in a circumferential groove and the insert seals against the wall bar 1. In turn, above the insert 29 is a distance sleeve 28, at the top end of which is an insert 29, which feeds the water to the next shower housing.

On the outside of the wall bar, between the two housings 6 and encompassing the wall bar 1 is a pipe 33, which maintains a distance between the two

housings 6. This guarantees the correct axial position of housing 6. Pipe 33 can also be used to connect the two housings 6 together, so that they can together rotate around pipe 1. This rotation of housing 6 around the pipe causes the corresponding shower 7 to switch-off, similar to illustration of same in Figure 2.

Figure 5 shows a modified embodiment. In this case, the wall bar consists of a horizontally arranged pipe 34 to be mounted to a wall connection with an internal opening 35, which does not run to the end of the pipe 34. Formed at this point and meeting the internal opening 35 is a threaded bore, into which a nipple 36 is screwed. This nipple is fastened to the top area of a pipe 37, which together with the pipe 34 forms the wall bar 1. In an area further below towards the bottom end 38, protruding onto the pipe is a bracket 39 that contains a base 40 fastened onto the wall. Screwed into the base 40 is an insert 41, which in the area of its front end, contains an opening running parallel to the wall surface into which the wall bar 1 is mounted. This arrangement allows a step in the wall or an uneven wall surface to be compensated. In the embodiment of Figure 5, a shower hose can be connected to the bottom end of the wall bar 1. This arrangement also involves water being fed from the wall connection through the wall bar and on to the shower.

Figure 6 shows a simplified embodiment without a bottom holder 39. In this case, attached to the wall bar is a bracket 42 for the handle of a hand shower, which can be pushed onto this wall bar and fixed by the usual method.
